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G&D miniMUX2

Installation and Operation

About this manual

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Safety instructions

Please read the following safety instructions carefully before you start operating the G&D product. The instructions well help in avoiding damages to the product and in preventing possible injuries.

Keep this manual handy for all persons who will be using this product.

Follow all warnings or operating instructions which are on the device or stated in this user manual.

⚠ **Beware of electric shocks**

To avoid the risk of electric shock, do not open the device or remove the covers. If service is required, please contact our technicians.

⚠ **Disconnect the main power plug or the power supply before installation**

Before installation, ensure that the device has been disconnected from the power source. Disconnect the main power plug or the power supply of the device.

⚠ **Ensure constant access to the power plugs**

During the installation of the devices, ensure that the power plugs remain accessible.

⚠ **Avoid tripping hazards**

Avoid tripping hazards while laying cables.

⚠ **Only use a grounded voltage source**

Operate this device by using a grounded voltage source.

⚠ **Use only the provided G&D power pack**

Operate this device with the provided G&D power pack or with the power pack listed in the manual.

⚠ **Operate the device only in designated areas.**

The devices are designed for indoor use. Avoid exposure to extreme cold, heat or humidity.

The »miniMUX2« KVM switch

The *miniMUX2* KVM switch enables the user to operate up to two computers via one console.

Both keyboard and mouse that are connected to the KVM switch can be used to operate the computers centrally. A monitor, which is also connected to the KVM switch, displays the video output of both computers.

NOTE: In addition to the basic version (for one video channel), the *miniMUX2-*MC2 is available as a variant which supports two video channels per computer.

To switch between the computers, the user is enabled to use the buttons on the front panel of the KVM switch or, more comfortably, configurable key combinations.

Support of PS/2 and USB input devices

A PS/2 *or* a USB keyboard can be used to operate the KVM switch and the connected computers. While connecting the console mouse, the user can choose between these connection types.

Two variants of the KVM connection cable are available to connect the computer to the KVM switch:

- **PS/2 variant (»CPU« KVM connection cable)**
  Two *PS/2* interfaces transmit both mouse and keyboard signals to the computer.
- **USB variant (»CPU-USB« KVM connection cable)**
  A *USB* interface transmits both mouse and keyboard signals to the computer.

The signals of both input devices can be transmitted to the computers through PS/2 or USB interfaces, independently from the connection type of both console keyboard and console mouse (PS/2 or USB).

NOTE: To use the expanded functions of special keyboards, use the *CPU* KVM connection cable for applying a PixelPower keyboard.

Apply the *CPU-USB* KVM connection cable for employing a USB multimedia or Sun keyboard.

Package contents

miniMUX2 (basic version)

- 1 × *miniMUX2* KVM switch
- 1 × power pack (12V/24W)
- 1 × IEC power cable
- 2 × KVM connection cable to connect the computers
- 1 × data cable (*Update-Cable-2*)
- 1 × Installation and Operating Guide

miniMUX2-MC2

- 1 × *miniMUX2-MC2* KVM switch
- 1 × power pack (12V/24W)
- 1 × IEC power cable
- 2 × KVM connection cable to connect the computers
- 2 × video cable (*VGA-M/M*)
- 1 × data cable (*Update-Cable-2*)
- 1 × Installation and Operating Guide

NOTE: The KVM switches of the *miniMUX2* series are available as desktop or as rackmount variant (see *Order numbers* on page 32).

Installation

Overview of the interfaces

The front panel of the KVM switch

The front panel of the *miniMUX2* KVM switch provides two USB interfaces to connect a USB keyboard and/or mouse.

The front panel also provides a *Service* port. This port is used for operating the setup menu (see page 12) and for carrying out firmware updates.

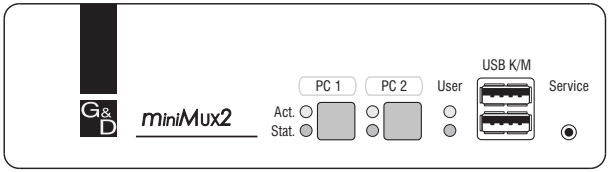


Figure 1: Front view of the KVM switch

The active channel can be selected by using one of the two buttons on the front panel. The front panel also provides several LEDs (see *Status displays* on page 8).

The back panel of the KVM switch

The back panel of the KVM switch provides interfaces to connect the console devices and the computers. The following page contains a detailed description of these interfaces.

Setting up the device

1. Ensure that the computers, which are to be connected to the KVM switch, are turned off. If the computers are provided with both keyboard and mouses, unplug the cables of the input devices from the interfaces of the computers.
2. Place the KVM switch between the computers and the console. Please mind the maximum cable length between the KVM switch and the computers, which are to be connected:
   - *PS/2 variant* of KVM connection cable: maximum 6 metres
   - *USB variant* of KVM connection cable: maximum 4 metres
3. Before installing the KVM switch, decide which button on the front panel of the device should be assigned to which computer.

> **NOTE:** While connecting the computer to the KVM switch, mind the interface numbers on the back panel of the device. The numbers of these interfaces correspond to the numbers at the buttons on the front panel of the device.

Connecting the console devices

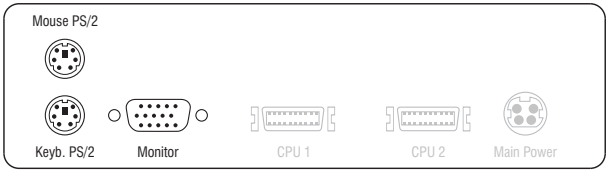


Figure 2: Interfaces to connect the console devices

Keyb. PS/2: Plug the connection cable of the PS/2 keyboard in this socket.

Mouse PS/2: Plug the connection cable of the PS/2 mouse in this socket.

> **NOTE:** You can also connect a USB keyboard and/or USB mouse to the *USB K/M* interfaces on the front panel of the device.
>
> The PS/2 interfaces (on the back panel of the KVM switch) as well as the USB interfaces on the front panel of the device can be used for connecting both console keyboard and console mouse.

Monitor: Connect the console monitor to this interface.

Additional interface of the multichannel variant

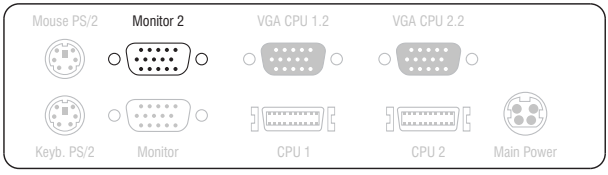


Figure 3: Interfaces to connect the second console monitor

Monitor 2: Connect the second console monitor to this interface

Connecting the computers

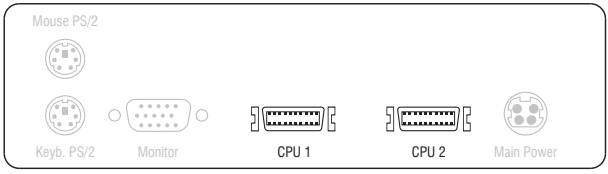


Figure 4: Interfaces to connect the console devices

CPU 1: Connect a KVM connection cable to this interface.

CPU 2: Connect a KVM connection cable to this interface.

IMPORTANT: KVM connection cables to connect a computer to the KVM switch are available as PS/2 or as USB variant (see page 2).

Connect the computers to be operated to the KVM connection cables (see below).

»CPU« KVM connection cable: Connect the 15-pin D-Sub plug to the computer's graphics output.

Connect the purple plug to the computer's PS/2 keyboard interface.

Connect the green Mini-DIN plug to the computer's PS/2 mouse interface.

»CPU« KVM connection cable: Connect the 15-pin D-Sub plug to the computer's graphics output.

Connect the USB-A plug to one of the computer's USB interfaces.

Additional interface of the multichannel variant

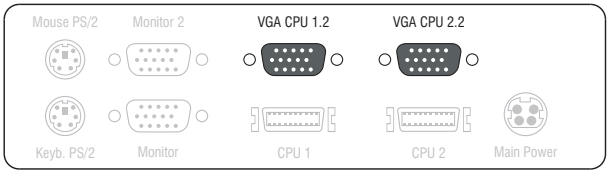


Figure 5: Interfaces to connect »Video channel 2« of both computers

VGA CPU 1.2: Use one of the supplied *VGA-M/M* video cables to connect this interface to the second video output of the first computer.

VGA CPU 2.2: Use one of the supplied *VGA-M/M* video cables to connect this interface to the second video output of the second computer.

Connecting the power supply

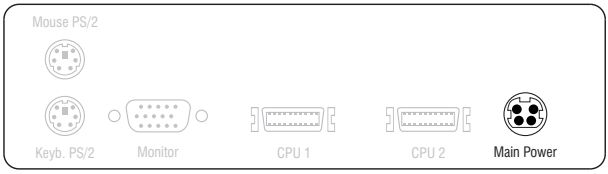


Figure 6: Socket to connect the power pack

Power: Plug the connection cable of the supplied power pack in this interface. Afterwards, connect the IEC power cable with the power pack and a power outlet.

Initiation

After the KVM switch has been installed (see *Installation* on page 4 ff.), it can be operated immediately.

Status displays

The LEDs on the front panel of the device enable you to control the operational status at all time:

Section	LED	Status	Meaning
CPU 1…2	Active	on	The KVM switch is currently active on this channel. All inputs are transmitted to this computer.
		off	The channel is currently inactive.
	Status	on	The computer is ready for operation.
		off	No computer connected or the computer is turned off.
User	Active	on	The keyboard was properly initialised.
		blinking	The LED is blinking after the device has been turned on and until the keyboard has been initialised.
	Status	on	The KVM switch is supplied with the necessary voltage.
		off	The KVM switch is turned off or the necessary voltage cannot be supplied. If necessary, check the proper connection of the power pack.

Switching between the computers

The user can either use the the buttons on the front panel of the device or key combinations to switch between different computers.

Keyboard and mouse inputs are transmitted to the active computer. The video signal of the active computer is displayed at the console monitor.

Switching via buttons

How to use buttons to switch to a certain channel:

- Press the button of the channel you wish to activate.

Switching via key combinations

How to use key combinations to switch to a certain channel:

- Press **Hotkey**+**Select key** *on the console keyboard*.
  The default settings allow you to switch between channels by pressing **Ctrl** and the select keys **1** and **2**.

IMPORTANT: Switching between the channels takes place if the pressed key combination is released.

NOTE: If one of these key combinations interferes with a key combination of an installed application program, the key combination of the KVM switch can be adjusted (see page 16 ff.).

Switching via step keys

IMPORTANT: The use of step keys is disabled in the default settings. Information on how to enable this function can be found on page 24.

Insted of using *select keys* to switch to a computer that is connected to the KVM switch, you can use *step keys* to switch the channels in ascending or descending order.

IMPORTANT: The active *step keys* depend on the selected *select keys*. The following table lists the step keys depending on the active select keys.

Select keys	»Back« step key	»Forward« step key
1…2	9	0
NUM 1…2	NUM 9	NUM 0
A…B	I	K
F1…F2	F9	F10

How to use step keys to switch to a certain channel:

1. Press **Hotkey+»Back« step key** or **Hotkey+»Forward« step key** on the console keyboard.

Configuration

The configuration of the KVM switch can optionally be changed in the setup mode or in the setup menu:

- Enable the *setup mode* using the console keyboard. You can change the configuration via special setup keys.
- The *setup menu* is operated with a terminal emulator and provides a user interface to configure the device.

Overview of the functions and default settings

The following table lists functions that can be configured as well as their default settings of the KVM switch.

Detailed description of the functions is given in the following pages:

Function	Default	Page
Using single or double hotkeys	single hotkeys	15
Changing the single hotkey	**Ctrl**	16
Changing the double hotkey	**Ctrl**+**Shift**	17
Changing the select keys	**1** and **2**	18
Disabling/Enabling the hotkey delay	7 seconds	19
Resetting the defaults		20
Auto-accessing the first channel	disabled	21
(De)activating the switching via front buttons	enabled	22
(De)activating the switching via hotkeys	enabled	23
(De)activating the switching via step keys	disabled	24
Changing the scan code set of a PS/2 keyboard	scan code set 2	25
Selecting the PS/2 keyboard type	standard	26
Enabling or resetting a PS/2 mouse		27
Selecting the USB keyboard type	PC Multimedia	28

Basic operation of the setup mode as well as the setup menu is explained in the following pages.

All functions that can be configured for the KVM switch are described in detail from page 15 ff.

Operating the setup mode

The setup mode can be enabled using the console keyboard. After enabling, the configuration of the KVM switch can be changed by using various step keys.

NOTE: Only one setup function can be performed after the calling of the setup mode. If you want to perform more functions, please restart the setup mode.

How to enable the setup mode:

- Press the **Hotkey**+**Backspace** (Standard: **Ctrl**+**Backspace**) key combination to enable the setup mode.

NOTE: The successful activation of the setup mode is displayed by the blinking **NUM**, ⇩ and **Scroll** control LEDs on the keyboard. Additionally, the yellow *User* LED will blink at the KVM switch.

IMPORTANT: The key combination for enabling the setup mode needs to be pressed for *seven seconds*.

After the first call of the setup mode, the hotkey delay can be disabled by pressing the setup key **8** (see page 19).

How to perform a setup function:

- After enabling the setup mode, press one of the setup keys described on the following pages.

How to end the setup mode without performing a function:

- Press **ESC** to end the setup mode.

Operating the setup menu

The setup menu provides a convenient alternative to view and edit the configuration of the KVM switch.

The switch can be operated through the setup menu which both easy operation and adjustment of several settings within a session.

The setup menu can be operated via any terminal emulator (e.g. *HyperTerminal* or *PuTTY*). Use the supplied service cable to connect the computer on which the terminal emulator is installed with the *Service* port of the device.

How to establish a connection within the terminal emulator:

1. Start any terminal emulator (e.g. *HyperTerminal* or *PuTTY*).
2. Establish a new connection in the terminal emulator and enter the following settings:
   - Bits per second: 115.200
   - Data bits: 8
   - Parity: none
   - Stop bits: 1
   - Flow control: none

Use the provided data cable (*Update-Cable-2*) to connect the computer to the *Service* port at the front panel of the KVM switch.

How to call up the setup menu:

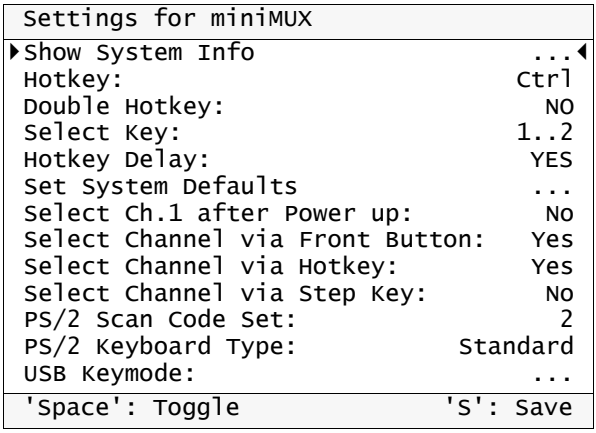
1. Use the terminal emulator to establish the connection to the KVM switch.
2. Connect the jack plug of the serial data cable to the *Service* port at the front panel of the device.

   As soon as the connection has been successfully established, the setup menu will be displayed in the terminal emulator (see figure on page 14).

IMPORTANT: If the serial data cable is already connected to the *Service* socket while the connection is being established, the terminal emulator displays *no* data!

In this case, unplug the data cable from the *Service* socket and reconnect it afterwards.

The setup menu lists all settings in tabular form:



The right column displays the active setting of the respective function.

Menu items with submenus containing more settings are indicated with three dots (`...`) in the right column.

How to operate the setup menu:

1. Use the **Arrow↑** or **Arrow↓** keys to select the desired menu item.

   The active entry is marked with angular ▸ arrows ◂.

2. Depending on the type of menu item, following action(s) can be carried out:

   - Menu items whose settings are displayed in the right column can be changed by pressing the **Space** key (repeatedly).
   - A menu item that has a sub-dialogue available can be opened by pressing **Enter**.

NOTE: The following pages provide detailed information on how to change a certain function.

Configuration settings

Using single or double hotkeys

If many application programs with key combinations are operated on one computer or if different G&D devices are used in one cascade, the number of available key combinations might be restricted.

In such a case, it is appropriate to apply double hotkeys.

How to enable single or double hotkeys:

Setup Mode

1. Press **Hotkey**+**Backspace** (default: **Ctrl**+**Backspace**) to enabled the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.

2. Press one of the setup keys listed below to enable the use of single or double hotkeys:

   S ‣ enables single hotkeys
   A ‣ disables double hotkeys

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Double Hotkey** entry.
3. Press the **Space** key (repeatedly) to enable the use of single or double hotkeys:

   No ‣ enables single hotkeys
   Yes ‣ disables double hotkeys

4. Press the **S** key to save your settings.

Depending on your settings, the active hotkey is converted into a double hotkey (or vice versa):

Single Hotkey	Double Hotkey
Ctrl	Ctrl+Shift
Alt	Alt+Shift
Alt Gr	Alt Gr+Ctrl
Win	Win+Ctrl
Shift	Shift+Win

Changing the single hotkey

Press the hotkey and the **Backspace** key simultaneously to start the setup mode of the KVM switch. Pressing the hotkey and the select key simultaneously enables the switching of channels.

If an application program or another G&D device uses the same hotkey within the cascade, the hotkey can be changed.

NOTE: The single hotkey **Ctrl** is preset at default.

How to change the current hotkey:

Setup Mode

1. Press the **Hotkey**+**Backspace** (default: **Ctrl**+**Backspace**) key combination to enable the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.

2. Press one of the setup keys listed below to enable a certain hotkey:

   Ctrl ‣ enables *Ctrl* hotkey
   Alt ‣ enables *Alt* hotkey
   Alt Gr ‣ enables *Alt Gr* hotkey
   Win ‣ enables *Win* hotkey
   Shift ‣ enables *Shift* hotkey

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Hotkey** entry.
3. Press the **Space** key (repeatedly) to enable a certain hotkey:

   Ctrl ‣ enables *Ctrl* hotkey
   Alt ‣ enables *Alt* hotkey
   Alt Gr ‣ enables *Alt Gr* hotkey
   Win ‣ enables *Win* hotkey
   Shift ‣ enables *Shift* hotkey

4. Press the **S** key to save your settings.

Changing the double hotkey

If the use of double hotkeys is enabled (see page 15), press the double hotkey and the **Backspace** key simultaneously to start the setup mode of the KVM switch. Switching of channels takes place by pressing the double hotkey and a select key at the same time.

If an application program or another G&D device uses the same hotkey within the cascade, the hotkey can be changed.

How to change the current double hotkey:

Setup Mode

1. *Requirement:* enabling of the double hotkeys (see page 15).
2. Press **Double hotkey**+**Backspace** (default: **Ctrl**+**Shift**+**Backspace**) to enable the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.
3. Press one of the setup keys listed below to activate the desired double hotkey:

   Ctrl ‣ enables *Ctrl+Shift* double hotkey
   Alt ‣ enables *Alt+Shift* double hotkey
   Alt Gr ‣ enables *Alt Gr+Ctrl* double hotkey
   Win ‣ enables *Win+Ctrl* double hotkey
   Shift ‣ enables *Shift+Win* double hotkey

Setup Menu

1. *Requirement:* enabling of the double hotkeys (see page 15).
2. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
3. Use the **Arrow↑** or **Arrow↓** keys to select the **Hotkey** entry.
4. Press the **Space** key (repeatedly) to enable the desired double hotkey:

   Ctrl+Shift ‣ enables *Ctrl+Shift* double hotkey
   Alt+Shift ‣ enables *Alt+Shift* double hotkey
   Alt Gr+Ctrl ‣ enables *Alt Gr+Ctrl* double hotkey
   Win+Ctrl ‣ enables *Win+Ctrl* double hotkey
   Shift+Win ‣ enables *Shift+Win* double hotkey
5. Press the **S** key to save your settings.

Changing the select keys

In the default settings, use the enabled select keys **1** and **2** to switch between the computers that are connected to the KVM switch.

For instance, you can switch to computer 2 by pressing **Hotkey+2** (default: **Ctrl+2**).

How to choose a different select key set:

Setup Mode

1. Press **Hotkey+Backspace** (default: **Ctrl+Backspace**) to enable the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.

2. Press one of the setup keys listed below to activate the particular set of select keys to switch the computers 1 and 2:

   1 ‣ enables select keys *1* and *2*
   NUM 1 ‣ enables select keys *NUM 1* and *NUM 2*
   Y ‣ enables select keys *A* and *B*
   F1 ‣ enables select keys *F1* and *F2*

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Select Key** entry.
3. Press the **Space** key (repeatedly) to enable the particular set of select keys to switch the computers 1 to 2:

   1…2 ‣ enables select keys *1* und *2*
   NUM 1…2 ‣ enables select keys *NUM 1* und *NUM 2*
   A…B ‣ enables select keys *A* und *B*
   F1…F2 ‣ enables select keys *F1* und *F2*

4. Press the **S** key to save your settings.

Disabling/Enabling the hotkey delay

In the default settings of the switch, the **Hotkey+Backspace** (default: **Ctrl+Backspace**) key combination must be pressed for seven seconds to start the setup mode.

If you want to start the setup mode directly after having pressed the key combination, the hotkey delay can be disabled.

How to disable/enable the hotkey delay:

Setup Mode

1. Press **Hotkey+Backspace** (default: **Ctrl+Backspace**) simultaneously to enable the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.

2. Press one of the setup keys listed below to enable/disable the hotkey delay:

   7 ‣ enables hotkey delay
   8 ‣ disables hotkey delay

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Hotkey Delay** entry.
3. Press the **Space** key (repeatedly) to disable/enable the hotkey delay:

   Yes ‣ enables hotkey delay
   No ‣ disables hotkey delay

4. Press the **S** key to save your settings.

Resetting the defaults

This function resets the default settings of the KVM switch.

IMPORTANT: Performing this function reactivates the default settings of the KVM switch as shown on page 11.

How to reset the default settings:

Setup Mode

1. Press **Hotkey**+**Backspace** (default: **Ctrl**+**Backspace**) to enable the setup mode.
   If the hotkey delay is active, press the key combination for *seven seconds*.
2. Press the setup key listed below to reset the default settings:
   D ‣ resets default settings

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Set System Defaults** entry.
3. Press **Enter** to reset the default settings.
4. Confirm the pop up security query with **Enter**.
   Pressing the **Q** key cancels the function.

Auto-accessing the first channel

Usually, after turning on the device, the recently active channel is accessed. The setting can be changed so that the computer connected to the first channel is automatically accessed when the device is turned on.

How to disable/enable the automatic access of the first channel after booting:

NOTE: Use the setup menu to enable/disable the option to automatically access the first channel after booting the device.

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch. Now plug the serial data cable into the service socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Select Ch.1 after Power up** entry.
3. Press the **Space** key (repeatedly) to select between the following options:

   No ‣ accesses the recently active channel after booting
   Yes ‣ accesses channel 1 after booting
4. Press the **S** key to save your settings.

(De)activating the switching via front buttons

In the defaults, you can use the buttons on the front panel to switch between the computers.

If desired, you can deactivate the front buttons in the setup menu.

How to enable/disable the switching via front buttons:

HINWEIS: Use the setup menu to (de)activate the switching via front buttons.

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Select Channel via Front Button** entry.
3. Press the **Space** key (repeatedly) to choose one of the following options:

   Yes ‣ disables the switching via front button
   No ‣ enables the switching via front button
4. Press the **S** key to save your settings.

(De)activating the switching via hotkeys

In the defaults, you can use hotkeys to switch between the computers.

If desired, you can deactivate this kind of switching in the setup menu.

How to enable/disable the switching via hotkeys:

NOTE: Use the setup menu to (de)activate the switching via hotkeys.

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Select Channel via Hotkey** entry.
3. Press the **Space** key (repeatedly) to choose one of the following options:

   Yes ‣ disables the switching via hotkeys
   No ‣ enables the switching via hotkeys
4. Press the **S** key to save your settings.

(De)activating the switching via step keys

Instead of using hotkeys to switch to one of the channels connected to the KVM switch, you can also use *step keys* to switch the channels in ascending or descending order.

NOTE: The use of step keys is disabled in the default settings.

After enabling the step keys, you can use the following key combinations to switch channels in ascending or descending order:

- **descending:** »back« step key (default: **Hotkey+9**)
- **ascending:** »forward« step key (default: **Hotkey+0**)

IMPORTANT: The active step keys are dependent on the selected select keys (see page 18). The following table lists the step keys depending on the active select keys.

Select keys	»Back« step key	»Forward« step key
1…2	9	0
NUM 1…2	NUM 9	NUM 0
A…B	I	K
F1…F2	F9	F10

How to disable/enable the use of step keys:

NOTE: Use the setup menu to enable or disable the usage of step keys.

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch. Now plug the serial data cable into the service socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **Select Channel via Step Key** entry.
3. Press the **Space** key (repeatedly) to choose between the following options:

   Off ‣ step keys disabled
   [Step-Keys] ‣ step keys enabled

4. Press the **S** key to save your settings.

Changing the scan code set of a PS/2 keyboard

NOTE: This function is only relevant for computers which are connected to the KVM switch using a PS/2 KVM connection cable.

If a key is pressed on the PS/2 keyboard, the keyboard processor sends a data packet that is called scan code. The two common scan code sets (sets 2 and 3) contain different scan codes.

The KVM switch interprets all inputs of the PS/2 keyboard with scan code set 2.

If the pipe ("|") cannot be entered or if the arrow keys of the keyboard do not work as expected, it is recommended to switch to scan code set 3.

How to change the setting of the scan code set:

Setup Mode

1. Press **Hotkey**+**Backspace** (default: **Ctrl**+**Backspace**) to enable the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.

2. Press one of the setup keys listed below to activate a particular scan code set:

   2 ‣ enables scan code set 2 for PS/2 keyboard inputs
   3 ‣ enables scan code set 3 for PS/2 keyboard inputs

3. Restart the KVM switch. After the restart, the keyboard is initialised and the selected scan code set does apply.

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **PS/2 Scancode Set** entry.
3. Press the **Space** key (repeatedly) to activate a particular scan code set:

   2 ‣ enables scan code set 2 for PS/2 keyboard inputs
   3 ‣ enables scan code set 3 for PS/2 keyboard inputs

4. Press the **S** key to save your settings.
5. Restart the KVM switch. After the restart, the keyboard is initialised and the selected scan code set does apply.

Selecting the PS/2 keyboard type

NOTE: This function is only relevant for computers which are connected to the KVM switch using a PS/2 KVM connection cable.

In addition to standard PS/2 keyboards, the KVM switch also supports *PixelPower Clarity (blue)* and *SKIDATA1* keyboards.

Select the keyboard type if you want to use such a keyboard at the console.

NOTE: The PS/2 keyboard type can only be selected in the setup menu.

How to select the PS/2 keyboard type:

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch and connect the serial data cable to the *Service* socket.
2. Use the **Arrow↑** or **Arrow↓** keys to select the **PS/2 Keyboard Type** entry.
3. Press the **Space** key (repeatedly) to choose the keyboard type:

   PixelPower Blue ‣ *PixelPower (blue)* keyboard
   SKIDATA1 ‣ *SKIDATA1* keyboard
   Standard ‣ standard PS/2 keyboard
4. Press the **S** key to save your settings.

Enabling or resetting a PS/2 mouse

NOTE: This function is only relevant for computers which are connected to the KVM switch using a PS/2 KVM connection cable.

Compared to USB mouses, PS/2 mouses do not support hot plug technology. You can therefore insert the PS/2 plug during operation, but it may be possible that the computer does not detect the input device.

To enable or reset the PS/2 mouse, the KVM switch can be used to send a special command to the computer.

Since the commands differ depending on the mouse type and the installed operating system, four different setup keys are provided.

NOTE: A PS/2 mouse can only be reset or enabled in the setup mode.

How to enable or reset a PS/2 mouse:

Setup Mode

1. Press **Hotkey+Backspace** (default: **Ctrl+Backspace**) to enable the setup mode.

   If the hotkey delay is active, press the key combination for *seven seconds*.

2. Press one of the following setup keys to enable or reset the PS/2 mouse:

   M ‣ enables the PS/2 mouse of a Linux PC
   I ‣ enables the PS/2 wheel mouse of a Linux PC
   E ‣ enables the PS/2 wheel mouse with additional keys of a Linux PC
   R ‣ resets the PS/2 mouse interface of a Windows PC

Selecting the USB keyboard type

NOTE: This function is only relevant for computers which are connected to the KVM switch using a USB KVM connection cable.

Various manufacturers added special keys to the standard keyboards. Some keyboards are provided with multimedia keys which enable the user to easily operate special multimedia functions of the computer.

Compared to standard keyboards, Sun desktops and servers are provided with separate keys (*Solaris Shortcut Keys*) to operate special system functions. These keys can be used at the console after enabling the keyboard mode for Sun desktops and servers. If the console only has a standard keyboard available, several key combinations are provided to emulate Solaris Shortcut Keys (see page 29).

Select the USB keyboard type in the setup menu in order to use all keys of such keyboards.

NOTE: The USB keyboard type can only be changed in the setup menu.

How to select the USB keyboard type:

Setup Menu

1. Use the terminal emulator to establish a connection to the KVM switch.

   If the setup menu is not displayed, the *Switch* mode of the service port is enabled. Enter »**#!**« to change to the setup menu.

2. Use the **Arrow↑** or **Arrow↓** keys to select the row **USB Keymode** of the channel and press **Enter**.

3. Use the **Arrow↑** or **Arrow↓** keys to select the channel whose setting you want to change in the *Set USB Keymode* submenu.

4. Press the **Space** key (repeatedly) to select one of the following keyboards:

   PC Multimedia ‣ Multimedia keyboard
   PC Standard ‣ Standard keyboard
   SUN German ‣ Sun keyboard (German layout)
   SUN US ‣ Sun keyboard (American layout)
   Apple ‣ Apple keyboard

5. Repeat steps 3 and 4 to change this setting for another channel.

6. Press the **S** key to save your settings.

IMPORTANT: Changing to the **SUN German** or **SUN US** keymode requires a reboot of the Sun computer.

If the console is provided with a sun keyboard, use the *Solaris Shortcut Keys* of this keyboard after enabling.

When using a standard keyboard, these functions can be performed by using the key combinations listed below:

Key combination	»Solaris Shortcut Key« of Sun keyboard
Ctrl+Alt+F2	Again
Ctrl+Alt+F3	Props
Ctrl+Alt+F4	Undo
Ctrl+Alt+F5	Front
Ctrl+Alt+F6	Copy
Ctrl+Alt+F7	Open
Ctrl+Alt+F8	Paste
Ctrl+Alt+F9	Find
Ctrl+Alt+F10	Cut
Ctrl+Alt+F11	Help
Ctrl+Alt+F12	Mute
Ctrl+Alt+NUM+	Loud
Ctrl+Alt+NUM-	Quiet
Ctrl+Alt+NUM*	Compose
Ctrl+Alt+Pause	Shutdown
Pause+A	Stop

Technical data

MINIMUX2 (BASIC VERSION)		
Switchable signals		keyboard, mouse, video
Console	Connections per device:	1
	Connection:	directly at the device
Interfaces per console	Keyboard/mouse:	2 × PS/2 socket
	USB keyboard/mouse:	2 × USB-A socket
	Video:	1 × D-Sub HD 15 socket
Computer	Connections per device:	2
	Connection:	KVM connection cable
Interfaces per computer	Keyboard, mouse & video:	1 × MDR socket
Video	Signal type:	analog
	Video resolution:	up to 1920 × 1440 @ 75 Hz
	Video bandwidth:	up to 400 MHz
Update	Mode:	local service socket
	Interface:	2,5 mm phone jack
Power supply	Type:	external power pack
	Connection:	Mini-DIN 4 socket
	Power input:	12 VDC
Power input	Standby:	1,1W@12VDC
	Operation:	4,5W@12VDC
Casing	Material:	anodised aluminium
	Dimensions (w × h × d):	▪ 160 × 44 × 210 mm (Desktop) ▪ 19“ × 1U × 210 mm (Rackmount)
	Weight:	approx. 0,8 kg
Operational environment	Temperature:	+5 to +40 °C
	Humidity:	< 80%, non-condensing
Conformity		CE, RoHs

MINIMUX2-MC2		
Switchable signals		keyboard, mouse, video
Console	Connections per device:	1
	Connection:	directly at the device
Interfaces per console	Keyboard/mouse:	2 × PS/2 socket
	USB keyboard/mouse	2 × USB-A socket
	Video:	2 × D-Sub HD 15 socket
Computer	Connections per device:	2
	Connection:	KVM connection cable
Interfaces per computer	Keyboard, mouse & video:	1 × MDR socket
	Additional video:	1 × D-Sub HD 15 socket
Video	Signal type:	analog
	Video resolution:	up to 1920 × 1440 @ 75 Hz
	Video bandwidth:	up to 400 MHz
Update	Mode:	local service socket
	Interface:	2,5 mm phone jack
Power supply	Type:	external power pack
	Connection:	Mini-DIN 4 socket
	Power input:	12 VDC
Power input	Standby:	1,4W@12VDC
	Operation:	5W@12VDC
Casing	Material:	anodised aluminium
	Dimensions (w × h × d):	160 × 44 × 210 mm (Desktop) 19“ × 1U × 210 mm (Rackmount)
	Weight:	approx. 0,8 kg
Operational environment	Temperature:	+5 to +40 °C
	Humidity:	< 80%, non-condensing
Conformity		CE, RoHs

Order numbers

miniMUX2

A210 0034	miniMUX2
A210 0035	miniMUX2-RM

miniMUX2-MC2

A210 0036	miniMUX2-MC2
A210 0037	miniMUX2-MC2-RM

KVM connection cables

A610 0007	CPU-2
A610 0008	CPU-4
A610 0009	CPU-6
A610 0058	CPU-USB-2
A610 0059	CPU-USB-4

Video cables

A630 0001	VGA-M/M-1
A630 0002	VGA-M/M-2
A630 0003	VGA-M/M-4
A630 0004	VGA-M/M-5
A630 0005	VGA-M/M-6

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